



Docket No. 1232-4792

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): AKIMOTO et al.

Group Art Unit: 2626

Serial No.: 10/006,530

Examiner: Beniyam MENBERU

Filed: December 5, 2001

For: COMMUNICATION APPARATUS FOR FORWARDING RECEIVED DATA

EXPRESS MAIL CERTIFICATE

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Express Mail Label No.: EV 497655146 US

Date of Deposit: May 18, 2006

I hereby certify that the following attached paper(s) and/or fee

1. Transmittal of Certified Translations of Convention Priority Documents (1 pg.)
2. Declaration (1 pg.);
3. Translation of Japanese Patent Application No. 2000-399017 (39 pgs.);
4. Translation of Japanese Patent Application No. 2000-377047 (32 pgs.); and
5. Return Receipt Post Card.

is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. §1.10 on the date indicated above and is addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

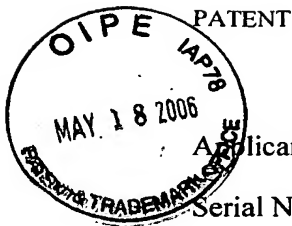
Albert Isles

(Typed or printed name of person mailing papers(s) and/or fee)

(Signature of person mailing paper(s) and/or fee)

Correspondence Address:

MORGAN & FINNEGAN, L.L.P.
3 World Financial Center
New York, NY 10281-2101
(212) 415-8700 Telephone
(212) 415-8701 Facsimile



05-22-06

Docket No. 1232-4792

AF
JFW**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant(s): AKIMOTO et al.

Group Art 2626

Serial No.: 10/006,530

Examiner: Beniyam MENBERU

Filed: December 5, 2001

For: COMMUNICATION APPARATUS FOR FORWARDING RECEIVED
DATA**TRANSMITTAL OF CERTIFIED TRANSLATIONS
OF CONVENTION PRIORITY DOCUMENTS**

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

An Amendment Under 37 C.F.R. § 1.116 was filed on May 8, 2006 in the above-identified application in which Applicants pointed out that a reference of record-Nishimura, U.S. Patent Publication No. 2002/0051181, filed on April 26, 2001 is not available as prior art against this application. While the instant application was filed on December 5, 2001, priority is claimed under 35 USC § 119 to Japanese Patent Application Nos. 2000-399017 and 2000-377047, which were filed on December 27, 2000 and December 12, 2000, respectively. Nishimura, as set forth in the May 8 Amendment, is thus not available as prior art against this application.

As discussed at page 9 of the May 8 Amendment, submitted herewith are copies of certified English translations of Japanese Patent Application Nos. 2000-399017 and 2000-377047. Applicants requested in the filed Amendment, and reiterate here, that the rejections issued in the February 8, 2006 Final Office Action based on Nishimura are improper and should be withdrawn.

In view of the foregoing, and as set forth in further detail the May 8 Amendment, Applicants respectfully submit that this application is in condition for allowance which action is earnestly requested.

In the event that a telephone conference would facilitate prosecution of the application in any way, the Examiner is invited to contact the undersigned at the number provided. An early and favorable examination on the merits is respectfully requested.

AUTHORIZATION

While no fees are believe due for the filing of this paper, the Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 13-4500, Order No. 1232-4792.

Respectfully submitted,
MORGAN & FINNEGAN, L.L.P.

Dated: May 16, 2006By: 

Sungho Hong
Registration No. 54,571

Correspondence Address:
MORGAN & FINNEGAN, L.L.P.
3 World Financial Center
New York, NY 10281-2101
(212) 415-8700 Telephone
(212) 415-8701 Facsimile

993423 v1

EV497655146US



DECLARATION

I, NOBUAKI KATO, a Japanese Patent Attorney registered No. 8517, of Okabe International Patent Office at No. 602, Fuji Bldg., 2-3, Marunouchi 3-chome, Chiyoda-ku, Tokyo, Japan, hereby declare that I have a thorough knowledge of Japanese and English languages, and that the attached pages contain a correct translation into English of the priority documents of Japanese Patent Application No. 2000-3777047 filed on December 12, 2000 and No. 2000-399017 filed on December 27, 2000 in the name of CANON KABUSHIKI KAISHA.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made, are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signed this 11th day of May, 2006

NOBUAKI KATO



2000-399017

[Name of the Document] Patent Application

[Reference No.] 4211024

[Date] December 27, 2000

[Addressed to] Commissioner of the
Patent Office

[International Classification] H04N 1/00

[Title of the Invention] COMMUNICATION TERMINAL APPARATUS,
COMMUNICATION METHOD, AND STORAGE
MEDIUM

[Number of the Claims] 13

[Inventor]

[Domicile or Residence] c/o Canon Kabushiki Kaisha
30-2, 3-chome, Shimomaruko,
Ohta-ku, Tokyo

[Name] NAOTO AKIMOTO

[Inventor]

[Domicile or Residence] c/o Canon Kabushiki Kaisha
30-2, 3-chome, Shimomaruko,
Ohta-ku, Tokyo

[Name] YASUO KOMADA

[Inventor]

[Domicile or Residence] c/o Canon Kabushiki Kaisha
30-2, 3-chome, Shimomaruko,
Ohta-ku, Tokyo

[Name] HIROSHI FUKADA

[Inventor]

[Domicile or Residence] c/o Canon Kabushiki Kaisha
30-2, 3-chome, Shimomaruko,
Ohta-ku, Tokyo

[Name] SHIGEYUKI SUGIYAMA

[Inventor]

[Domicile or Residence] c/o Canon Kabushiki Kaisha
30-2, 3-chome, Shimomaruko,
Ohta-ku, Tokyo

[Name] TOSHIYUKI TAKANO

[Inventor]
[Domicile or Residence] c/o Canon Kabushiki Kaisha
30-2, 3-chome, Shimomaruko,
Ohta-ku, Tokyo

[Name] YASUHIRO MATSUMOTO

[Inventor]
[Domicile or Residence] c/o Canon Kabushiki Kaisha
30-2, 3-chome, Shimomaruko,
Ohta-ku, Tokyo

[Name] NORIAKI SETO

[Applicant]

[Identification No.] 000001007

[Name] CANON KABUSHIKI KAISHA
FUJIO MITARAI

[Attorney]

[Identification No.] 100081880

[Patent Attorney]

[Name] TOSHIHIKO WATANABE

[Telephone Number] 03-35808464

[Indication of Official Fee]

[Prepayment Ledger No.] 007065

[Amount] ¥21000

[List of Filed Materials]

[Material] Specification 1

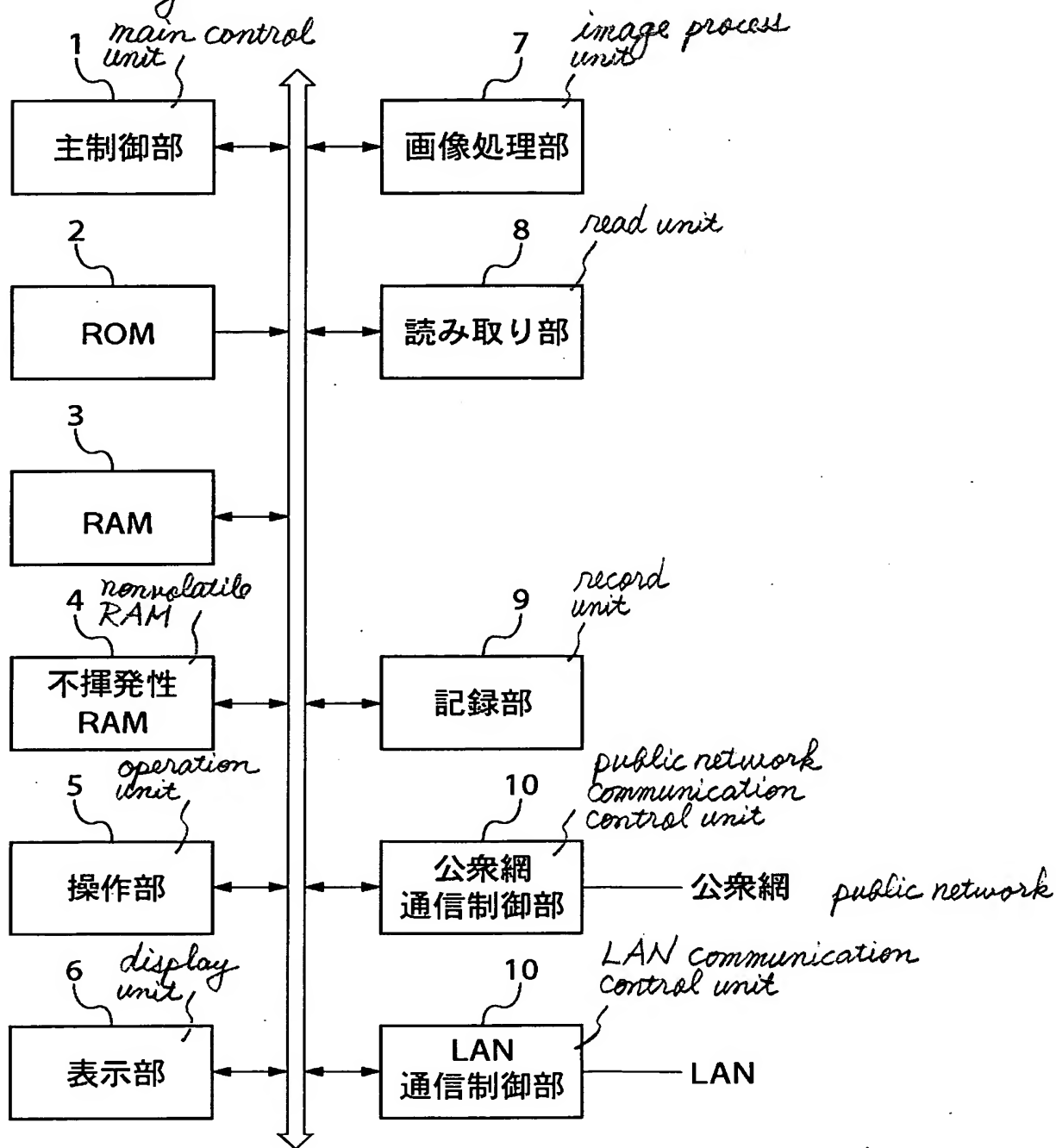
[Material] Drawings 1

[Material] Abstract 1

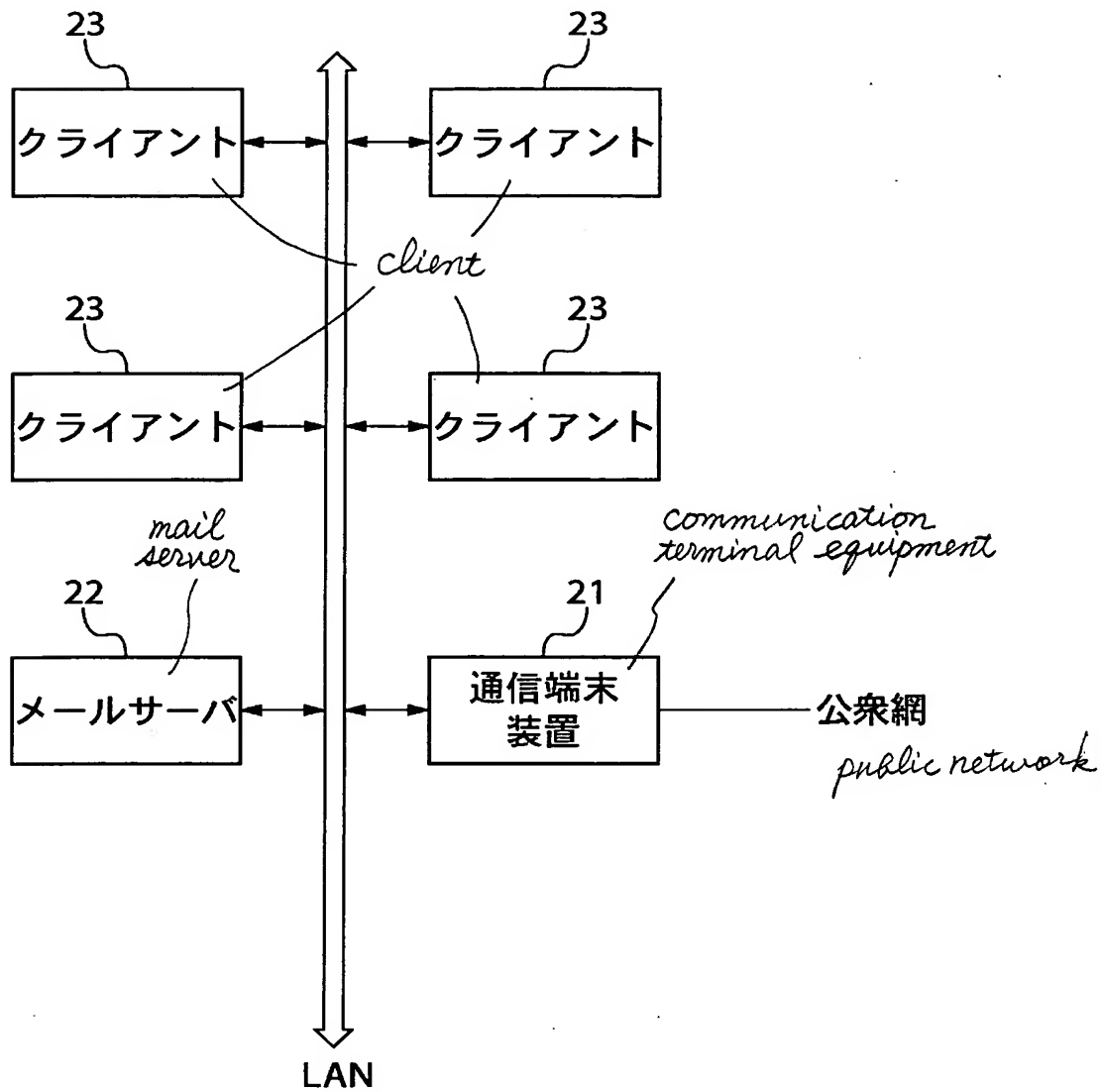
[Proof requirement] necessary

【書類名】 図面 [Document Title] Drawings

【図 1】 [Fig. 1]



【図2】 [Fig. 2]



【図3】[Fig. 3]

<i>abbreviated name of user</i> ユーザ略称		<i>attachment of image</i> 画像添付	<i>page</i> ページ	<i>color format</i> カラー形式	<i>monochrome format</i> モノクロ形式
<i>mail address</i> メールアドレス					
akimoto	<u>aki@aaa.co.jp</u>	Yes	All	JPEG	GIF(グレイ) <i>gray</i>
t-suzuki	<u>takasan@aaa.co.jp</u>	No			
y-suzuki	<u>yoshi@aaa.co.jp</u>	Yes	Cover	TIFF	MMR
yamanaka	<u>yama@aaa.co.jp</u>	Yes	All	PDF	PDF
⋮	⋮	⋮	⋮	⋮	⋮
⋮	⋮	⋮	⋮	⋮	⋮
⋮	⋮	⋮	⋮	⋮	⋮

【図4】[Fig. 4]

<i>color format</i> カラー形式		<i>division</i> 分割
JPEG	Yes	
TIFF	No	
PDF	No	
BMP	Yes	
⋮	⋮	
⋮	⋮	
⋮	⋮	

【図5】[Fig. 5]

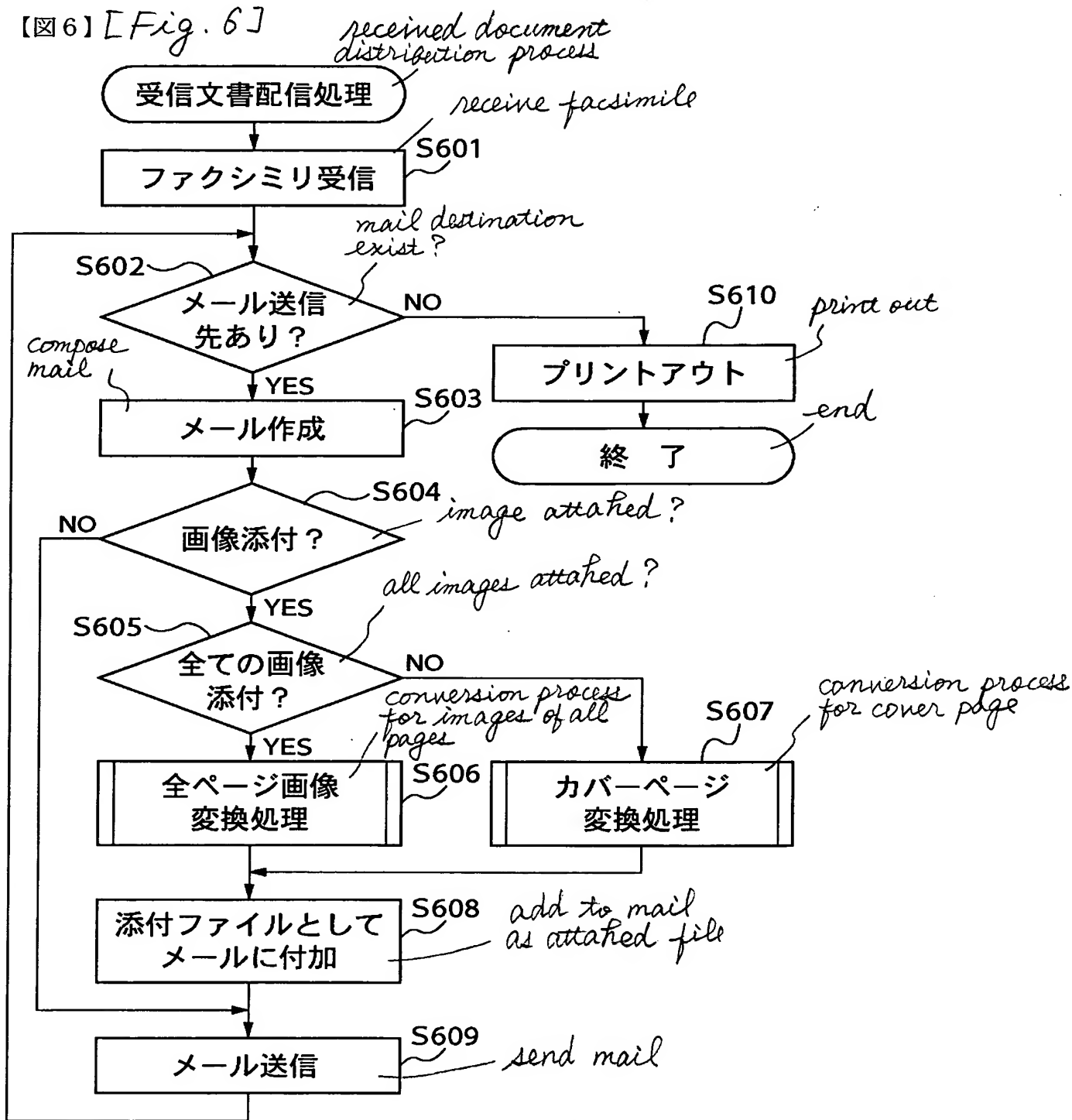
monochrome format

division

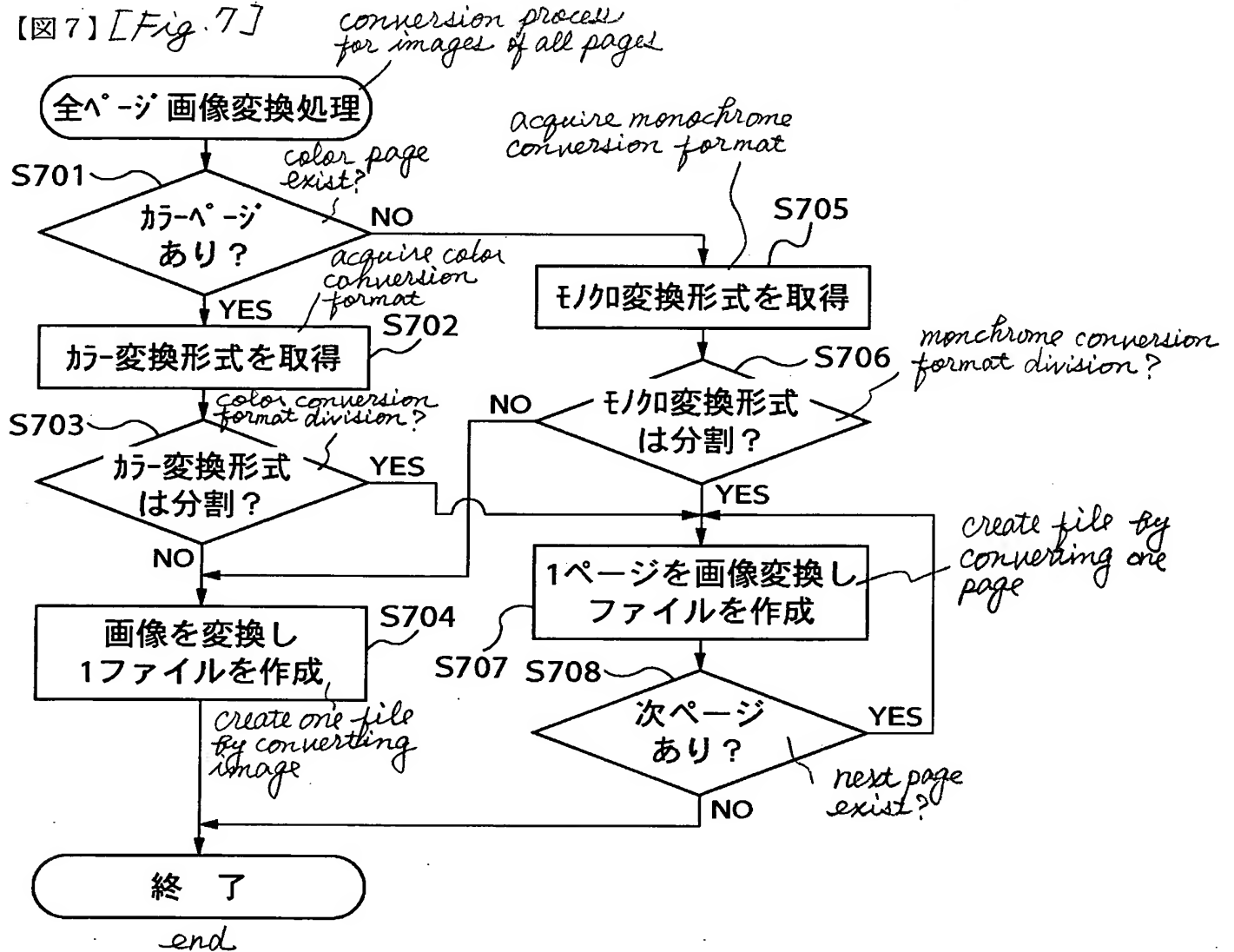
モノクロ形式	分割
MMR	Yes
GIF(グー)	Yes
PDF	No
JBIG	Yes
⋮	⋮

gray

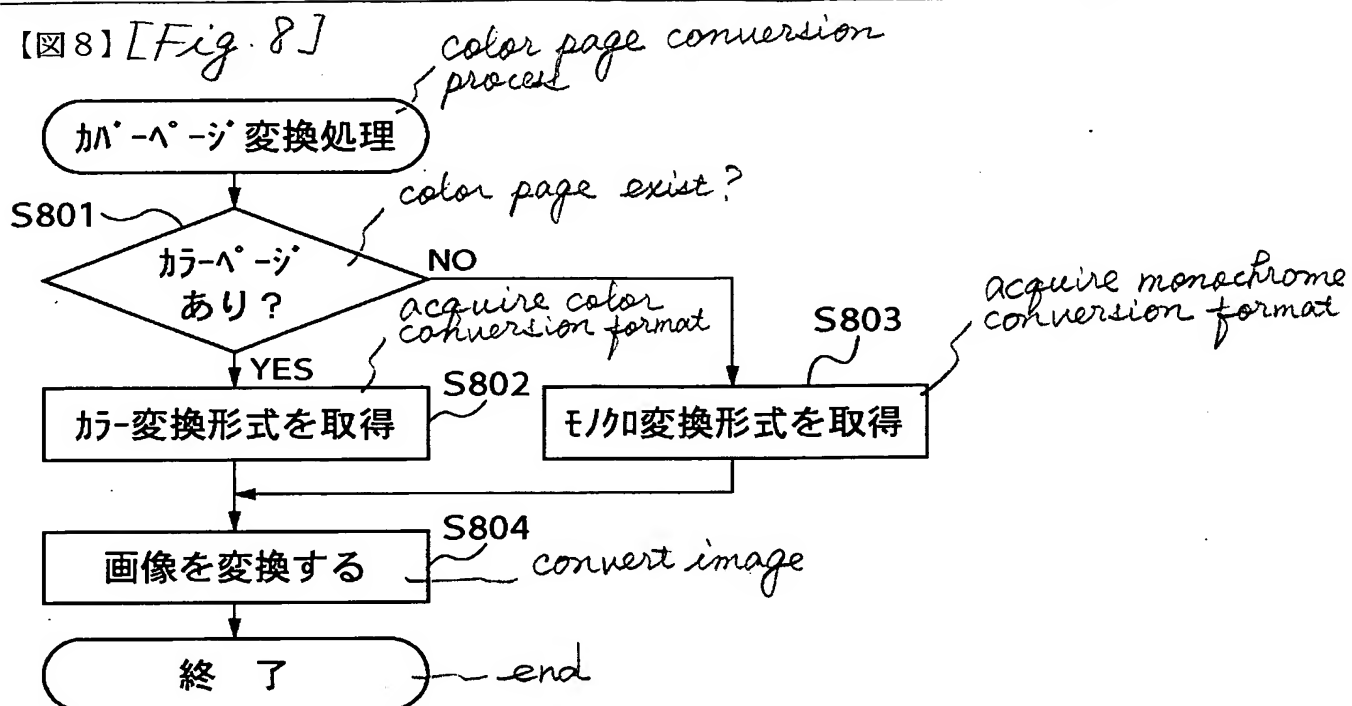
【図6】[Fig. 6]



【図7】[Fig. 7]



【図8】[Fig. 8]



[Document Title] SPECIFICATION

2000-399017

[Title of the Invention]

COMMUNICATION TERMINAL APPARATUS, COMMUNICATION
METHOD, AND STORAGE MEDIUM

5

[Claims]

1. A communication terminal apparatus which
performs facsimile transmission and reception through
a public network and is connected to plural clients through
10 a local area network (LAN), said apparatus comprising:

reception means for receiving an image file through
the public network;

registration means for registering registration
information of the clients;

15 judgment means for judging whether or not the client
of a transmission destination of the image file has been
registered as the registration information;

electronic mail generation means for generating an
electronic mail to be delivered based on the registration
20 information when the client has been registered, and
attaching the image file to the electronic mail; and

transmission means for transmitting the electronic
mail to which the image file has been attached to the
client of the transmission destination, based on the
25 registration information.

2. A communication terminal apparatus according

to Claim 1, wherein the registration information includes information concerning whether or not to attach the image file when the electronic mail is transmitted.

5 3. A communication terminal apparatus according to Claim 1 or 2, wherein the registration information includes information concerning whether the file attached when the electronic mail is transmitted is the whole of the image file or a part thereof.

10

 4. A communication terminal apparatus according to any one of Claims 1 to 3, wherein the registration information includes information concerning a mail address of the client.

15

 5. A communication terminal apparatus according to any one of Claims 1 to 4, wherein the registration information includes information concerning an encoding method of the image file to be attached when the electronic
20 mail is transmitted.

25

 6. A communication terminal apparatus according to any one of Claims 1 to 5, wherein the facsimile transmission and reception are performed based on ITU standard.

 7. A communication method for a communication

terminal apparatus which performs facsimile transmission and reception through a public network and is connected to plural clients through a local area network (LAN), said method comprising:

5 a reception step of receiving an image file through the public network;

 a registration step of registering registration information of the clients;

 a judgment step of judging whether or not the client
10 of a transmission destination of the received image file has been registered as the registration information;

 an electronic mail generation step of generating an electronic mail to be delivered on the basis of the registration information when the client has been
15 registered, and attaching the image file to the electronic mail; and

 a transmission step of transmitting the electronic mail to which the image file has been attached to the client of the transmission destination, based on the
20 registration information.

8. A communication method according to Claim 7, wherein the registration information includes information concerning whether or not to attach the image file when
25 the electronic mail is transmitted.

9. A communication method according to Claim 7 or

8, wherein the registration information includes information concerning whether the file attached when the electronic mail is transmitted is the whole of the image file or a part thereof.

5

10. A communication method according to any one of Claims 7 to 9, wherein the registration information includes information concerning a mail address of the client.

10

11. A communication method according to any one of Claims 7 to 10, wherein the registration information includes information concerning an encoding method of the image file to be attached when the electronic mail is transmitted.

15

12. A communication method according to any one of Claims 7 to 11, wherein the facsimile transmission and reception are performed based on ITU standard.

20

13. A storage medium which stores therein a program for executing a communication method for a communication terminal apparatus which performs facsimile transmission and reception through a public network and is connected to plural clients through a local area network (LAN), said program comprising:

25

a reception module of receiving an image file through

the public network;

a registration module of registering registration information of the clients;

a judgment module of judging whether or not the client
5 of a transmission destination of the received image file has been registered as the registration information;

an electronic mail generation module of generating an electronic mail to be delivered on the basis of the registration information when the client has been
10 registered, and attaching the image file to the electronic mail; and

a transmission module of transmitting the electronic mail to which the image file has been attached to the client of the transmission destination, based on the
15 registration information.

[Detailed Description of the Invention]

[0001]

[Field of the Industrial Application]

20 The present invention relates to a communication terminal apparatus, a communication method and a storage medium. More particularly, the present invention relates to a communication terminal apparatus which has a function of transmitting and receiving an image according to a
25 facsimile transmission procedure through a public network and a function transmitting and receiving data on a local area network (LAN), a communication method which is

applicable to the communication terminal apparatus, and a storage medium which stores a program for executing the communication method.

[0002]

5 [Prior Art]

According as the information society develops, the number of companies which fix the infrastructure by constructing the in-company network increases. According to such a plenitude of network, in order to
10 be able to deliver the facsimile received documents from a conventional public network to the network terminal, a system of providing the facsimile server on a LAN and thus delivering the facsimile received document to the terminal on the LAN is conceived. In this system, for
15 example, the client at the destination to which the facsimile received document is to be delivered is recognized by using a sub address signal based on ITU standard and reading the destination from the received image through a character recognition process, and the
20 facsimile received document is delivered as an attached file to the mail address of the relevant client.

[0003]

[Problems to be Solved by the Invention]

However, in the above delivery system using the
25 facsimile server, for example, when the client at the destination to which the facsimile received document is to be delivered is recognized by using the sub address

signal, if the facsimile at the transmission destination does not correspond to the sub address, it is impossible to directly deliver the data from the facsimile to the client. Moreover, when the client at the destination
5 is recognized by the character recognition, it is impossible to correctly execute the delivery. In any case, if the delivery is impossible, an operator has to manually execute the delivery.

[0004]

10 Further, since the document received from the public network is directly delivered to the client on the LAN, it is necessary to introducing the expensive facsimile server, whereby such a fact imposes a burden on the client with respect to costs.

15 [0005]

An object of the present invention is to provide a user-friendly communication terminal apparatus and a communication method which allow the facsimile received document from the public network to the client on the
20 LAN simply and costly, and the storage medium which stores therein the program to achieve the communication method.

[0006]

[Means and Operations for Solving the Problems]

To achieve the above object, in Claim 1, a
25 communication terminal apparatus which performs facsimile transmission and reception through a public network and is connected to plural clients through a local area network

(LAN), is characterized by comprising:

reception means for receiving an image file through the public network;

5 registration means for registering registration information of the clients;

judgment means for judging whether or not the client of a transmission destination of the image file has been registered as the registration information;

10 electronic mail generation means for generating an electronic mail to be delivered based on the registration information when the client has been registered, and attaching the image file to the electronic mail; and

transmission means for transmitting the electronic mail to which the image file has been attached to the 15 client of the transmission destination, based on the registration information.

[0007]

In Claim 2, a communication terminal apparatus according to Claim 1 is characterized in that the 20 registration information includes information concerning whether or not to attach the image file when the electronic mail is transmitted.

[0008]

In Claim 3, a communication terminal apparatus 25 according to Claim 1 or 2 is characterized in that the registration information includes information concerning whether the file attached when the electronic mail is

transmitted is the whole of the image file or a part thereof.

[0009]

In Claim 4, a communication terminal apparatus
5 according to any one of Claims 1 to 3 is characterized
in that the registration information includes information
concerning a mail address of the client.

[0010]

In Claim 5, a communication terminal apparatus
10 according to any one of Claims 1 to 4 is characterized
in that the registration information includes information
concerning an encoding method of the image file to be
attached when the electronic mail is transmitted.

[0011]

15 In Claim 6, a communication terminal apparatus
according to any one of Claims 1 to 5 is characterized
in that the facsimile transmission and reception are
performed based on ITU standard.

[0012]

20 To achieve the above object, in Claim 7, a
communication method for a communication terminal
apparatus which performs facsimile transmission and
reception through a public network and is connected to
plural clients through a local area network (LAN), is
25 characterized by comprising:

a reception step of receiving an image file through
the public network;

a registration step of registering registration information of the clients;

a judgment step of judging whether or not the client of a transmission destination of the received image file
5 has been registered as the registration information;

an electronic mail generation step of generating an electronic mail to be delivered on the basis of the registration information when the client has been registered, and attaching the image file to the electronic
10 mail; and

a transmission step of transmitting the electronic mail to which the image file has been attached to the client of the transmission destination, based on the registration information.

15 [0013]

In Claim 8, a communication method according to Claim 7 is characterized in that the registration information includes information concerning whether or not to attach the image file when the electronic mail is transmitted.

20 [0014]

In Claim 9, a communication method according to Claim 7 or 8 is characterized in that the registration information includes information concerning whether the file attached when the electronic mail is transmitted is the whole
25 of the image file or a part thereof.

[0015]

In Claim 10, a communication method according to

any one of Claims 7 to 9 is characterized in that the registration information includes information concerning a mail address of the client.

[0016]

5 In Claim 11, a communication method according to any one of Claims 7 to 10 is characterized the registration information includes information concerning an encoding method of the image file to be attached when the electronic mail is transmitted.

10 [0017]

 In Claim 12, a communication method according to any one of Claims 7 to 11 is characterized in that the facsimile transmission and reception are performed based on ITU standard.

15 [0018]

 To achieve the above object, in Claim 13, a storage medium which stores therein a program for executing a communication method for a communication terminal apparatus which performs facsimile transmission and
20 reception through a public network and is connected to plural clients through a local area network (LAN) is provided, and the program is characterized by comprising:

 a reception module of receiving an image file through the public network;

25 a registration module of registering registration information of the clients;

 a judgment module of judging whether or not the client

of a transmission destination of the received image file has been registered as the registration information;

an electronic mail generation module of generating an electronic mail to be delivered on the basis of the registration information when the client has been registered, and attaching the image file to the electronic mail; and

a transmission module of transmitting the electronic mail to which the image file has been attached to the client of the transmission destination, based on the registration information.

[0019]

[Embodiment]

The embodiment of the present invention will be described in detail hereafter by using the attached drawings.

[0020]

Fig. 1 is a block diagram showing an overview configuration of communication terminal equipment involved in the embodiment of the present invention.

[0021]

In the communication terminal equipment in Fig. 1, a main control unit 1 controls the entire communication terminal equipment, that is, a RAM 3, a nonvolatile RAM 4, an operation unit 5, a display unit 6, an image process unit 7, a read unit 8, a record unit 9, a public network communication control unit 10 and a LAN communication

control unit 11 according to a program stored in a ROM
2.

[0022]

The RAM 3 stores monochrome binary image data and
5 color multivalued image data read by the read unit 8,
image data wherein these are JPEG-compressed in the image
process unit 7, monochrome binary data outputted from
a telephone line via the public network communication
control unit 10, color JPEG-compressed data, color
10 multivalued data wherein it is expanded, and color binary
data binarized to allow further recording in the record
unit 9. In addition, the RAM 3 stores management
information for managing the above data, work information
for apparatus operation, and status information of the
15 record unit.

[0023]

The nonvolatile RAM 4 is an SRAM with battery backup,
and stores the data unique to the apparatuses such as
telephone numbers and client abbreviations and
20 information on apparatus setting by clients. In this
embodiment, an area in Fig. 3 mentioned later is newly
provided, which stores for each client detailed settings
such as an electronic mail address for distributing a
received facsimile document, whether or not to attach
25 an image on distribution, specification of an attached
page and so on.

[0024]

The operation unit 5 is comprised of a start key for transmission, reception and so on, a mode key for specifying a communication mode such as color and monochrome in a transmitted image, a copy key for duplication, a stop key for stopping operation, a registration key for registering with a one touch key, an error release key for releasing an error and a LAN distribution key for registering detailed settings when distributing a received facsimile document to clients on a LAN.

[0025]

The display unit 6 is comprised of a dot matrix type LCD and an LCD driver, and performs various types of display based on control from the main control unit 1.

[0026]

The image process unit 7 performs image processing such as compression of the monochrome binary data read by the read unit 8, JPEG-compression of the color multivalued data, compression/expansion of monochrome binary data for sending and receiving images to and from the other party of communication, expansion of the monochrome binary data when recording the images in the record unit 9, expansion of color JPEG images and so on, and stores the data in the RAM 3. In addition, it executes a process of converting the monochrome binary data and the color JPEG image data received from the other party and stored in the RAM 3 into image formats

specified by the clients for the purpose of distributing the data by attaching it to electronic mail, such as JPEG (Joint Photographic Experts Group), TIFF (Tagged Image File Format), PDF (Portable Document Format), BMP (Bit Map), MMR (Modified Modified READ Code), JBIG (Joint Bi-Level Image Experts Group) and so on.

[0027]

The read unit 8 is comprised of a DMA controller, a CCD or a contact type image censor (CS), a general purpose IC and so on, and sends to the RAM 3 or the image process unit 7 the data read by using the CCD or the CS based on the control of the main control unit 1.

[0028]

The record unit 9 is comprised of the DMA controller, a thermal head or a BJ printer head (Bubble Jet Printer Head) of B4/A4 size, a general purpose IC and so on, and is controlled by the main control unit 1 to extract record data stored in the RAM 3 and print it out as a hard copy.

[0029]

The public network communication control unit 10 is comprised of V. 34, V. 17, V. 29, V. 27 ter and V. 21 (H, L) modems, a clock generation circuit connected to these modems, an NCU and so on, and modulates send data stored in the RAM 3 and outputs it to the telephone line (public network) based on the control of the main control unit 1. In addition, in compliance with the

recommendations of the ITU T. 30, it implements monochrome/color facsimile communication, and demodulates the images received from the telephone line to store them in the RAM 3.

5 [0030]

The LAN communication control unit 11 is connected as a physical layer to a network circuit such as the Ethernet, and implements a process of distributing a received document to the clients on the network by performing TCP/IP (Transmission Control Protocol/Internet Protocol) protocol, MIME (Multi-purpose Internet Mail Extensions) conversion (Base64 for instance) or SMTP (Simple Mail Transfer Protocol) for the sake of conducting electronic mail communication.

15

[0031]

Fig. 2 is a block diagram of a configuration example of the network on which the communication terminal equipment in Fig. 1 is placed.

20 [0032]

In the network in Fig. 2, communication terminal equipment 21 in Fig. 1 is connected to a mail server 22 and a plurality of clients 23 via the LAN. The electronic mail is transmitted in an accumulated distribution type transmission form wherein it is accumulated in the mail server 22 via the communication terminal equipment 21 once and then distributed to destinations. The clients

25

make an inquiry from the respective clients 23 to the mail server 22 over receipt of the electronic mail addressed to their terminal clients, and when the electronic mail addressed to them is accumulated in the mail server 22, they receive it from the mail server 22 and notify their terminal clients thereof.

[0033]

Fig. 3 is a diagram describing an example of a table for storing destination information when distributing to the client on the LAN the monochrome or color document facsimile-received from the public network by the communication terminal equipment in Fig. 1.

[0034]

The table in Fig. 3 is placed in the nonvolatile RAM 4, and the information of this table is configured to be set from the operation unit 5. For instance, a LAN distribution key is allocated for table registration, and when this key is pressed, operations such as adding a client to this table, changing the settings and deleting a client can be performed. In Fig. 3, the information to be stored includes client and user abbreviations for the sake of identifying distribution registrants, electronic mail addresses of the destinations, image attachment information on whether or not to attach received images to the electronic mail, document page information on whether to attach all pages or only a top page in the case of attaching the images, color conversion format

information for specifying a document conversion format when attaching a color document and monochrome conversion format information for specifying the document conversion format when attaching a monochrome document.

5 [0035]

Fig. 4 is a diagram describing an example of a table for storing the image format used as an alternative in setting a color conversion format information of the destination information table in Fig. 3.

10 [0036]

The table in Fig. 4 is stored in the ROM 2 or a RAM 3, and stores a document format that can be converted when distributing the color document received by the communication terminal equipment in Fig. 1 on the LAN as an attachment file.

[0037]

The image formats stored in the table in Fig. 4 can be converted into the JPEG, TIFF, PDF and bit map formats according to this embodiment. In addition, this table stores division information on, when converting the image in each color image format, whether to create the attachment file by dividing it on each page or as one document that is not divided.

[0038]

25 Fig. 5 is a diagram describing an example of a table for storing the image format used as an alternative in setting monochrome conversion format information of the

destination information table in Fig. 3.

[0039]

The table in Fig. 5 is stored in the ROM 2 or the RAM 3, and stores a document format that can be converted
5 when distributing as the attachment file the monochrome document received from the public network by the communication terminal equipment in Fig. 1 on the LAN.

[0040]

The image format stored in the table in Fig. 5 can
10 be converted into the MMR, GIF (gray scale), PDF and JBIG formats according to this embodiment. In addition, this table stores the division information on, when converting the image in each monochrome image format, whether to create the attachment file by dividing it
15 on each page or as one document that is not divided.

[0041]

Fig. 6 is a flowchart of a received document distribution process executed by the communication terminal equipment in Fig. 1.

20 [0042]

First, it receives an image file from the other facsimile via the public network in compliance with the ITU T. 30 recommendation (step S601). The image file is comprised of pages of monochrome images or pages of
25 color images. The monochrome images are encoded in one of the formats of MH, MR, MMR and JBIG, and the color images are encoded in the JPEG format and received. This

communication terminal equipment retains the encoded data of each page in the RAM 3 together with color information of monochrome/color and page information such as the information on an encoding system.

5 [0043]

Next, it determines from the contents set in a destination information table (Fig. 3) whether or not one or more destination clients of the image file are registered in the table (step S602), and when one or
10 more clients are registered therein, it creates a header portion and text of the electronic mail for transmission (step S603). To create the header portion, it sets the information stored in a mail address column of the destination information table in a To field indicating
15 the destination. As for a Subject field indicating a heading, it is also possible to store character information indicating the receipt of the facsimile such as "Fax Received" in the ROM 2 in advance and set it therein.

In addition, a text field can have either the above
20 information indicating the receipt of the facsimile or nothing in particular set therein.

[0044]

In a subsequent step S604, it determines whether or not an image attachment setting of the destination
25 client is "Image attached based on the destination information". As a result of determination in the step S604, when it is "Not attached", it proceeds to a step

S609. On the other hand, when it is "Image attached", it determines whether or not the attached page setting of the destination client is all pages based on the destination information table (step S605).

5 [0045]

As a result of determination in the step S605, when the attached page setting is "All pages", it executes a conversion process for images of all pages in Fig. 7 to convert the received images into the image format specified by the client (step S606), and when the attached
10 page setting is not "All pages", it executes a conversion process for cover page in Fig. 8 mentioned later to convert only the top page of the received images into the image format specified by the client (step S607).

15 [0046]

In a step S608, the images created in the above conversion process for images of all pages (Fig. 7) or the conversion process for cover page (Fig. 8) are attached as the attachment file to the electronic mail. To be
20 more specific, the MIME system uses an encoding system such as Base64 to convert the images that are a binary file into character strings sendable by the electronic mail, which are described following the text of the mail.

[0047]

25 In a subsequent step S609, it sends the created electronic mail by SMTP via the mail server 22 on the LAN to the destination clients 23 registered in the

destination information table, and then it executes the following process in the step S602.

[0048]

As a result of the determination in the step S602,
5 if the mail is sent to all the destinations registered in the destination information table and no more mail destination is left, it prints out the received images from the record unit 9 and erases the images from the RAM 3 (step S610) to finish this process.

10 [0049]

Fig. 7 is a flowchart of the conversion process for images of all pages in a step S606 in Fig. 6.

[0050]

First, it determines whether or not there is a color
15 page from image information on each page of the received document (step S701), and if there is even one color page, it acquires the color conversion format information of the destination clients based on the destination information table (Fig. 3) (step S702), and it determines
20 whether or not a division setting of the color conversion format acquired in the step S702 is "Divided" based on the color conversion format table (Fig. 4) (step S703).

[0051]

As a result of the determination in the step S703,
25 if the division setting is "Not divided", the image process unit 7 creates one file by converting all the pages of the received images into the image format specified by

the client (step S704) and finishes this process.

[0052]

As a result of the determination in the step S703,
if the division setting of the acquired color conversion
5 format is "Divided", the image process unit 7 first creates
one file by converting the top page of the received images
into the image format specified by the client (step S707),
and subsequently determines whether or not there is a
next page to the received images (step S708).

10 [0053]

As a result of the determination in the step S708,
if there is the next page, it returns to the step S707,
and creates one file by converting the next page of the
received images into the image format specified by the
15 client again. It repeats this process until there is
no more page and finishes this process when there is
no more page.

[0054]

As a result of the determination in the step S701,
20 if there is no color page in the received document, it
acquires the monochrome conversion format information
(encoding system) of the destination clients based on
the destination information table (step S705), and
determines whether or not the division setting of the
25 monochrome conversion format acquired in the step S705
is "Divided" based on the monochrome conversion format
table (Fig. 5) (step S706).

[0055]

As a result of the determination in the step S706, if the division setting is "Not divided", the image process unit 7 creates one file by converting all the pages of the received images into the image format specified by the client (step S704) and finishes this process.

[0056]

As a result of the determination in the step S706, if the division setting of the acquired monochrome conversion format is "Divided", the image process unit 7 first creates one file by converting the top page of the received images into the image format specified by the client (step S707).

[0057]

As a result of the determination in the step S708, if there is the next page, it returns to the step S707, and creates one file by converting the next page of the received images into the image format specified by the client again. It repeats this process until there is no more page and finishes this process when there is no more page.

[0058]

Fig. 8 is a flowchart of a cover page conversion process in the step S607 in Fig. 6.

[0059]

First, it determines whether or not the first page of the received document is the color page (step S801).

As a result of the determination in the step S801, if it is the color page, it acquires the setting of the color conversion format information (encoding system) of the clients to be distributed based on the destination information table (step S802), and the image process unit 7 creates one file by converting the first page of the received images into the conversion image format acquired in the step S802 (step S804) and finishes this process.

10 [0060]

As a result of the determination in the step S801, if the first page of the received document is not the color page, it acquires the setting of the monochrome conversion format information of the clients to be distributed based on the destination information table (step S803), and the image process unit 7 creates one file by converting the first page of the received images into the conversion image format acquired in S803 (step S804) and finishes this process.

20 [0061]

While the above embodiment is an example wherein the process of searching the electronic mail destination information table and sending the converted images by attaching them to the mail is repeated until there is no more destination, it is also possible to search the electronic mail destination information table and repeating the process of attaching the converted image

to the electronic mail until the delivery destination becomes zero, and, after all the electronic mails to be transmitted were generated, to transmit all the electronic mail. In this method, it is possible to
5 generate the electronic mail only by adding the address to the destination of the electronic mail to the clients to be distributed that are setting the same attached image format, whereby the time for image conversion processing can be reduced.

10 [0062]

Moreover, it is also possible to convert the received images into each format in advance and select the attached images according to the specification of the client when creating the electronic mail, whereby the entire
15 processing time can be reduced in the case where there are a large number of the clients to be distributed.

[0063]

Moreover, it is needless to say that the present invention is applicable to a case where, from the storage
20 medium storing program modules of software for achieving the above embodiment, the program is supplied to the system or the apparatus, thereby achieving the functions of the embodiment. In this case, the program module itself read out of the storage medium achieves the new functions
25 of the present invention, whereby the storage medium storing the program modules constitutes the present invention.

[0064]

In the above embodiment, the program module has been stored in the ROM 2 of the communication terminal device.

However, the storage medium for supplying the program
5 module may be, for example, a floppy disk, a hard disk,
an optical disk, a magnetooptical disk, a CD-ROM, a CD-R,
a DVD, a magnetic tape, a nonvolatile memory card, or
the like. That is, it is unnecessary to limit one specific
medium, that is, any medium capable of storing the above
10 program can be used.

[0065]

[Effect of the Invention]

As described in detail above, according to the
communication terminal apparatus according to Claim 1,
15 the communication method according to Claim 7 and the
storage medium according to Claim 13, at the time of
facsimile reception from the public network, it is possible
to generate and distribute the electronic mail, according
to the client registration information, to all the clients
20 registered in the client registration information,
whereby it is possible to easily and certainly deliver
the documents from any facsimile to the client on the
LAN without introducing the expensive facsimile server.

In addition, as detailed specification for each client
25 such as whether or not there is the attachment file,
specification of the attached pages and specification
of the format of the attached images is possible, it

allows settings meeting the needs of the clients to be made so that operability is markedly improved.

[Brief Description of the Drawings]

5 Fig. 1 shows a block diagram of communication terminal equipment of the embodiment;

 Fig. 2 is a block diagram of a configuration example of a network on which the communication terminal equipment in Fig. 1 is placed;

10 Fig. 3 is a diagram describing an example of a table for storing destination information when distributing a monochrome document or a color document received from the public network by the communication terminal equipment in Fig. 1 to a client on a LAN;

15 Fig. 4 is a diagram describing an example of a table for storing an image format used as an alternative in setting a color conversion format information of the destination information table in Fig. 3;

 Fig. 5 is a diagram describing an example of a table
20 for storing an image format used as an alternative in setting a monochrome conversion format information of the destination information table in Fig. 3;

 Fig. 6 is a flowchart of a received document distribution process executed by the communication
25 terminal equipment in Fig. 1;

 Fig. 7 is a flowchart of a conversion process for images of all pages in a step S606 in Fig. 6; and

Fig. 8 is a flowchart of a cover page conversion process in a step S607 in Fig. 6.

[Description of Reference Numerals of Symbols]

- 5 1 ... main control unit
- 2 ... ROM
- 3 ... RAM
- 4 ... nonvolatile RAM
- 5 ... operation unit
- 10 6 ... display unit
- 7 ... image process unit
- 8 ... read unit
- 9 ... record unit
- 10 ... public network communication control unit
- 15 11 ... LAN communication control unit

[Document Title] Abstract

[Abstract]

[Problem] It provides a user-friendly communication terminal apparatus and a communication method which allow
5 the facsimile received document from the public network to the client on the LAN simply and costly and also allow the setting at the time of delivery for each client, and the storage medium which stores therein the program to achieve the communication method.

10 [Means for Achieving Object] When the client at the transmission destination of the received image file is registered in the delivery destination information table, the header portion and the contents of the electronic mail to be transmitted are generated. Then, based on the delivery
15 destination information table, an all page image conversion process or a cover page conversion process is executed to the image file of the client at the delivery destination, so as to convert the image file into the image format designated by the client, and the converted image is attached
20 to the electronic mail as the attached file. Subsequently, the generated electronic mail is transmitted by the SMTP to the client terminal 23 of the transmission destination registered on the delivery destination information table through the mail server 22 on the LAN.

25 [Selective Drawing] Fig. 6